PROCEEDINGS OF THE WILSON ORNITHOLOGICAL CLUB

By Olin Sewall Pettingill, Jr., Secretary

The Wilson Ornithological Club held its Twenty-fifth Annual Meeting in Louisville, Kentucky, on November 24–26, 1939. Headquarters and sessions were in the Brown Hotel.

This was the first time in its history that the Club had met in Kentucky. In spite of the fact that the meeting was set ahead one week to follow the unexpected date of Thanksgiving suddenly proclaimed by President Roosevelt, and in spite of the fact that many of the states, including Kentucky, did not follow this proclamation, attendance at the meeting was highly satisfactory.

Short business sessions were held Friday morning and Saturday afternoon. The Executive Council met on the evening preceding the meeting and again Friday evening. There were program sessions morning and afternoon on Friday and Saturday. An excellent photograph exhibit was presented. The exhibit was officially opened on Friday evening by a reception given to the members of the Wilson Ornithological Club by the Kentucky Ornithological Society and the C. W. Beckham Bird Club. Other social gatherings included the Annual Dinner on Saturday evening and several motor trips on Sunday to points of interest in Kentucky.

BUSINESS SESSIONS

President Margaret M. Nice called to order the first business session on Friday morning at 9:30. The minutes of the previous meeting were approved without being read since they had already been published in *The Wilson Bulletin*. The reports of the Secretary, Treasurer, Editor, Librarian, Membership Committee, Endowment Fund Committee, and Wildlife Conservation Committee were read and approved.

A list of persons nominated to membership during the current year was placed on the table for approval by the organization.

The President appointed three temporary committees.

They were:

Resolutions: W. E. Saunders, Amelia R. Laskey, and Lawrence H. Walkinshaw. Auditing: Wendell P. Smith, Eugene P. Odum.

Nominating: Theodora Nelson, S. E. Perkins, III., J. Southgate Y. Hoyt.

The final business session was called to order at 4:45 Saturday afternoon. Persons nominated to membership during the current year were formally elected.

The Resolutions Committee presented the following resolutions which were then

adopted:

Whereas, the Kings River Canyon in California is of outstanding value as a wilderness area, therefore, be it *Resolved*, that the Wilson Ornithological Club urge its establishment at a National Park.

Resolved, that the Wilson Ornithological Club desires to place itself on record as being heartily in favor of protection for all hawks and owls, believing that all of these species have their place in the scheme of nature and that it is a mistake to destroy them.

Resolved, that the Wilson Ornithological Club at its Twenty-fifth Annual Meeting on November 24–26, 1939, in Louisville, Kentucky, hereby tenders its thanks and appreciation to the Local Committee, consisting of Messrs. Brecher, Carpenter, Clay, Young, and Mesdames Schneider and Slack, and especially to its Chairman, Mr. Burt L. Monroe, for their untiring and successful efforts for the entertainment of the Wilson Ornithological Club entailing such careful planning and so much detailed work; be it further Resolved, that the Wilson Ornithological Club expresses its thanks to the Local Committee for arranging the splendid exhibit of bird photographs; and be it still further Resolved, that the Wilson Ornithological

Club hereby tenders its thanks to the Kentucky Ornithological Society and the C. W. Beckham Bird Club for their kindness to the visiting members of the Wilson Ornithological Club.

The Nominating Committee offered the following report:

President—Lawrence E. Hicks, Ohio Wildlife Research Station, Ohio State University, Columbus, Ohio.

First Vice-President—George Miksch Sutton, Cornell University, Ithaca, New York.

Second Vice-President—S. Charles Kendeigh, University of Illinois, Champaign, Illinois.

Secretary—Olin Sewall Pettingill, Jr., Carleton College, Northfield, Minnesota. Treasurer—Gustav Swanson, University Farm, University of Minnesota, St. Paul, Minnesota.

Additional Members of the Executive Council—Maurice Brooks, West Virginia University, Morgantown, West Virginia; Miles D. Pirnie, W. K. Kellogg Bird Sanctuary, Battle Creek, Michigan; Lawrence H. Walkinshaw, Battle Creek, Michigan.

The report of the Nominating Committee was accepted by motion and the Secretary was authorized to cast one ballot for the nominees, thus electing them officers of the Wilson Ornithological Club for the ensuing year.

The session was formally adjourned at 5:10 P.M.

MEETINGS OF THE EXECUTIVE COUNCIL

The Secretary reported that since 1937 a questionnaire has been submitted to each person elected a member of the Wilson Ornithological Club. This questionnaire is actually the first of three pages originally submitted in 1937 to the entire membership. Since the present supply is running low, the Secretary asked whether it would be advisable to revise this questionnaire to send to all new members during the coming year. The Council thereupon instructed the Secretary to revise the questionnaire.

An interesting discussion was held on the possibility of inviting regional ornithological organizations to affiliate with the Wilson Ornithological Club. Such questions were raised as: How large should such an organization be? What would be its actual relationship to the Wilson Ornithological Club? What would be the benefits of such a relationship? The Council authorized the President to appoint a Committee on Affiliated Societies to study this problem and as soon as possible to submit a report with recommendations to the Executive Council. Maurice Brooks was chosen Chairman of this Committee, with Albert F. Ganier, S. Charles Kendeigh and Myron H. Swenk as the other members.

The Program Committee was encouraged to arrange for the next Annual Meeting a symposium, preferably on some aspect of game management or conservation.

The President asked for comments on the work and effectiveness of the new Wildlife Conservation Committee. It was the concensus of opinion that the accomplishments during the first year of its existence were satisfactory but that the scope of its work should be further increased. There should be more accounts of conservation activities published in *The Wilson Bulletin*. At the suggestion of Miles D. Pirnie, Chairman of the Committee, the Council recommended increasing the size of the Committee to include members from more sections of the country.

The Secretary brought the attention of the Council to a statement in the Constitution that may be interpreted as being contradictory to another statement in the By-laws. In Article III, Section 2, it may be inferred (as a result of the listing of officers of the Club in the preceding section) that the Editor is among the officers to be elected by ballot, whereas By-law 9 states that the Editor shall be appointed by the Executive Council. The Council ruled that the contradiction was undoubtedly an oversight and that Article III, Section 2, of the Constitution

should be corrected to read: "Officers, except the Editor, shall be elected by ballot at the annual meeting by the voting members."

Dr. Josselyn Van Tyne was appointed Editor of *The Wilson Bulletin*. Earlier in the year (in January) the Council had appointed Dr. Van Tyne to this office to fill the unexpired term of Dr. T. C. Stephens.

At the invitation of the Museum of Natural History of the University of Minnesota, the Minneapolis Audubon Society, and the Minnesota Ornithologists' Union, the Council voted to meet in 1940 in Minneapolis, Minnesota, on November 22–23. Sessions will be held in the new Museum building.

PROGRAM SESSIONS

The first program session opened on Friday morning at 9:30 with an address of welcome by the Honorable Joseph D. Scholtz, Mayor of the City of Louisville, and a response on behalf of the Club by President Margaret M. Nice: Other sessions followed on Friday afternoon, Saturday morning and afternoon.

The four sessions included 36 papers, of which only one was read by title. The papers given during the first three sessions were largely technical, being based on the following ornithological studies: life history, 10; distribution and migration, 6; bird behavior, 3; economic, 3; historical, 1; ecological, 2. The conservation programs of the Bureau of Biological Survey and the Hawk Mountain Sanctuary Association and the research program of the Edmund Niles Huyck Preserve were outlined by their respective representatives. The papers given during the fourth session were largely popular in nature, all but one being based on natural color motion pictures of birds. Three concerned expeditions, the remaining four concerned photographic studies of well known birds.

Below is given the program of papers together with brief abstracts:

OPENING SESSION, FRIDAY MORNING, NOVEMBER 24.

1. An Unusual Oven-bird Family. (10 minutes).

H. W. Hann, Zoology Department, University of Michigan, Ann Arbor, Michigan.

(Abstract omitted because this paper is being published in full in the Bulletin.)

2. Another Year's Study of Nesting Eastern Bluebirds. (15 minutes). AMELIA R. LASKEY, Nashville, Tennessee.

(Abstract omitted because this paper is being published in full in the Bulletin).

- 3. Winter Studies of Color-banded Chickadees. (Read by Title).

 George J. Wallace, Pleasant Valley Bird and Wild Flower Sanctuary, Lenox,
 Massachusetts.
- Hawk Mountain Sanctuary Up-to-Date. (15 minutes). Mrs. C. N. Edge, Hawk Mountain Sanctuary Association, New York, New York.
 An account of the recent educational and conservational developments at

the Hawk Mountain Sanctuary, Drehersville, Pennsylvania.

Economic Importance of the Double-crested Cormorant in Minnesota. (15
minutes). Gustav Swanson, Division of Economic Zoology, University of
Minnesota, St. Paul, Minnesota.

The examination of over 100 stomachs of the Double-crested Cormorant from Minnesota, together with correlated field studies, show that in the Interior the bird's food habits are more likely to be harmful than on the Atlantic coast. The major foods found in the stomachs examined were fishes usually

considered valuable as food and game fish. In Lake of the Woods the Cormorants interfere to a considerable extent with commercial fishing, and as a result, are much persecuted by the fishermen. A method of controlling the damage to commercial fishing without killing the birds was suggested.

A Method of Studying Migration. Illustrated by lantern slides. (20 minutes).
 J Murray Speirs, University of Illinois, Champaign, Illinois.

(Abstract omitted at the speaker's request since the material is to be used in a doctoral thesis.)

Factors Affecting Length of Incubation in Birds. Illustrated by lantern slides.
 (20 minutes). S. Charles Kendeigh, University of Illinois, Champaign, Illinois.

The rates of oxygen absorption and moisture loss by embryos of the House Wren were measured at various stages of incubation and at a wide variety of temperatures. The rate of oxygen absorption and probably the rate of development increase up to 100° F. but not to higher temperatures. Moisture and weight losses also increase to a maximum with rise in temperature, this maximum coming at higher temperatures as development progresses. A 24-hour removal of eggs from the nest and exposure to various temperatures has least effect on hatching at 95° and 100° F. Considering the greater uniformity of response, high percentage of hatch, the average egg temperature in the nest, and the possible stimulation of fluctuating nest temperatures, 95° F. appears the approximate incubation temperatures in this species. Relative humidity in the nest averages about 35 per cent. The length of the incubation period may be determined by the stage of development attained at hatching, the total energy exchanges necessary to reach this stage, and the rate at which these energy exchanges take place.

8. Some Observations on the Mental Capacity of Birds. (15 minutes). Albert F. Ganier, Nashville, Tennessee.

The extent of the ability of dumb animals, including birds, to associate related observations and to conduct their actions accordingly, has long been a matter of discussion. This paper attributed considerable ability of this kind to birds, within their particular spheres of activity and to a greatly varying degree as between species. Numerous examples from the personal observations of the speaker were cited as proof.

FRIDAY AFTERNOON

9. More Waterfowl? Illustrated by lantern slides. (10 minutes).

MILES D. PIRNIE, W. K. Kellogg Bird Sanctuary, Battle Creek, Michigan.

A discussion of the following statements: Waterfowl concentrations continue on good refuges. Ducks census methods are unsatisfactory. Waterfowl

tinue on good refuges. Ducks census methods are unsatisfactory. Waterfowl natural history studies are progressing rapidly under the American Wildlife Institute, Ducks Unlimited, and the United States Bureau of Biological Survey.

10. The Nesting of the Turkey Vulture in Ohio. Illustrated by lantern slides. (20 minutes). Victor Coles, *University of Cincinnati Teachers College, Cincinnati, Ohio*.

A detailed presentation of the nesting activities of the Turkey Vulture in the limestone caves of central Ohio. Various types of nesting sites were shown and data given on weight and measurements of eggs and young birds. Measurements were given of young birds from hatching to the time of leaving the nest at 80 days.

Species of Birds Described by Alexander Wilson. Illustrated by lantern slides.
 (15 minutes). Lawrence I. Grinnell, Laboratory of Ornithology, Cornell University, Ithaca, New York.

Alexander Wilson was the first who truly studied the birds of North America in their natural abodes and from real observation. He described thirty new species and subspecies of birds. He ranks ninth among ornithologists in the number of North American species and subspecies first described. His greatest activity was among the Warblers and Fringillids. A number of species, and likewise the genus *Wilsonia* of Bonaparte, were named in honor of him.

Wilson made several expeditions in search of material information and subscribers to his 9-volume publication, "American Ornithology," which he profusely illustrated with his own colored plates. His most extensive expedition was by skiff, horseback, and afoot from Philadelphia to New Orleans.

12. New England's Purple Finch Invasion of 1939. Illustrated by lantern slides. (15 minutes). RICHARD LEE WEAVER, Dartmouth College, Hanover, New Hampshire.

A record of the unprecedented invasion of Purple Finches which occurred in New England during the early months of 1939. Data were obtained by banding over 2100 individuals and marking 1000 of them with colored feathers. Returns from an appeal for information made by radio and the Associated Press were also summarized by the speaker.

13. Program of Research at the Edmund Niles Huyck Preserve, Rensselaerville, New York. Illustrated by lantern slides. (10 minutes). Eugene P. Odum, Biological Research Division, Edmund Niles Huyck Preserve, Rensselaerville, New York.

The E. N. Huyck Preserve, Inc. is a 500-acre tract located 27 miles southwest of Albany. It was set aside with endowment by Mrs. Huyck in memory of her late husband and in recognition of the need for preserving natural areas for recreation, education, and study. Approximately 100 acres comprise two artificial lakes and adjoining marshes, 200 acres in abandoned fields and orchards partly in a natural process of succession, partly with artificial planting. The area is well protected by surrounding territory of a similar nature. A scientific advisory committee has been set up and provisions made for a biological station, a resident biologist, and several summer investigators to devote their full time to research. Work is being planned along broad ecological lines with intensive investigations in many phases of field biology.

Ring-billed Gulls of the Atlantic Coast. Illustrated by lantern slides. (20 minutes). HARRISON F. LEWIS, National Parks Bureau, Ottawa, Ontario.

This paper was concerned with Ring-billed Gulls in breeding colonies in the northern part of the Gulf of St. Lawrence; the known history, number, situation, and size of such colonies; their protection, food supplies, mortality, and success; habits of the gulls in these colonies and their association with other species; results of banding juveniles in some of the colonies.

15. The Prothonotary Warbler—A Contrast in Nesting Conditions, Tennessee and Michigan. Illustrated by lantern slides. (20 minutes). LAWRENCE H. WALKINSHAW, Battle Creek, Michigan.

Some of the data presented in this paper are outlined below:

- I. Introduction.
 - a. Comparison of regions.
 - b. Number of bird-houses in use.
 - c. Number of birds observed.
- II. Nesting.
 - a. Singing of males.
 - b. Nesting dates in Michigan and Tennessee.
 - c. Egg laying.
 - d. Breeding season.
 - e. Size of egg sets in Michigan and Tennessee.
- III. Survival of young.
 - a. Per cent of nest success in Michigan and Tennessee.
 - b. Per cent of egg success in Michigan and Tennessee.
 - c. Known factors causing destruction of young and eggs.

IV. Some difference in weights.

V. Banding.

VI. Territory.

16. Gathering of the Purple Martins. Illustrated by lantern slides. (20 minutes). EARL G. WRIGHT, The Chicago Academy of Sciences, Chicago, Illinois.

An account of clocking the activities of Purple Martins from the time they arrived at the roost until they settled down for the night, and again in the morning when the birds left the roost.

17. Notes on the Development of Song Sparrows and a Cowbird. Illustrated by lantern slides and motion pictures. (30 minutes). Margaret M. Nice, Chicago, Illinois.

Song Sparrows and Cowbirds pass through three stages in the nest and two outside it before reaching independence at the age of four weeks. These are: (1), first 4 days, coordinations largely concerned with nutrition; (2), 5 and 6 days, first appearance of other motor coordinations; (3), 7, 8, 9 days, rapid acquisitions of new motor coordinations; (4), 10 to 16 days, leaving of the nest to attainment of flight; (5), 17 to 28 days, attainment of independent feeding reactions. The majority of passerines seem to attain a certain proficiency in flight at about 17 days and to become independent of parental care at about 28 days.

SATURDAY MORNING

18. Observations on the Feeding and Courtship Activities of the Black Duck. (10 minutes). HARRY LEON KUTZ, Laboratory of Ornithology, Cornell University, Ithaca, New York.

Under controlled conditions full-winged Black Ducks dived and secured grain placed in ten feet of water. Both full-winged and captive ducks utilize a method of "treading" to secure food in the shallows. The female Black Duck, both under wild and captive conditions, often assumes the initiative in courtship. In captive ducks, pugnacity of the male stimulates the female sexually.

19. The Breeding Warblers of the Central Appalachian Region. (15 minutes).

MAURICE BROOKS, West Virginia University, Morgantown, West Virginia.

An ecological survey of the wood warblers which breed in the central Appalachian area, i.e., western Maryland, West Virginia, and western Virginia. It is believed that certain species, Golden-winged and Black-throated Green Warblers, for example, have here adapted themselves to breeding situations which are unique for those species. The distribution of the species also offers considerable support to Merriam's concept of life zones.

20. Roosting Habits of the Robin in Spring. (15 minutes). Joseph C. Howell, Laboratory of Ornithology, Cornell University, Ithaca, New York.

(Abstract omitted because this paper is being published in full in the Bulletin.)

21. Some Remarks on the Breeding Birds of the Spruce-Fir Forest in the Great Smoky Mountains National Park. (15 minutes). ARTHUR STUPKA, National Park Service, Gatlinburg, Tennessee.

The spruce-fir forests which cover the upper parts of the higher mountains in the southern Appalachian region represent a modified type of Canadian zone. This is revealed by both the floral and faunal complex which prevails. Birds which breed within the limits of this zone in the Great Smoky Mountains National Park were discussed. Observations covered a period of four years.

22. Sex Ratio in Shorebirds. (10 minutes). Josselyn Van Tyne, Museum of Zoology, University of Michigan, Ann Arbor, Michigan.

A discussion of the little information available on the sex ratio of shore-birds. Large numbers must be checked to ascertain actual sex ratios of bird species. In the case of birds whose sexes are alike in plumage, hunter's bags or museum series are the main source of information. Since there seems to be no selection of one sex or the other in museum collecting of some of these species, the study of such series seems to be a proper method of determining the sex ratio. It was found, for instance, that 22 large North American museums contain 1,137 Wilson Snipe (Capella delicata) with full data, taken at all seasons and in all parts of the range. Of these, 654 were males and 483 females, or 135.4 males to 100 females.

 Observations on the Nesting Habits of the Phoebe. (10 minutes). Wendell P. Smith, Wells River, Vermont.

Information on the time interval between arrival of the species and arrival of breeding individuals; mating; nest building; egg laying; incubation; care of young; growth rates and color changes in young; nest leaving; subsequent behavior of parents and young.

 Recent Developments in Waterfowl Lead-Poisoning Investigations. (15 minutes). Gustav Swanson, Division of Economic Zoology, University of Minnesota, St. Paul, Minnesota.

Experimentally it has been shown that a sub-lethal dose of lead poisoning may have an injurious effect upon the egg-laying capacity of Mallards. The fertility of the eggs laid, however, was not affected in the experiments

fertility of the eggs laid, however, was not affected in the experiments.

Surveys of a number of lake bottoms in Minnesota have revealed that a large number of shot are usually available in any lake over which a considerable amount of shooting has taken place. Such lead shot has been shown to remain close enough to the surface of the lake bottom to be accessible to ducks even on refuge lakes which have been closed to hunting for five years.

 The Present Status of the Conservation Program of the Bureau of Biological Survey. (15 minutes). W. C. Henderson, Bureau of Biological Survey, Washington, D.C.

A discussion of three aspects of the work of the Bureau: research projects; enforcement of the Bird Treaty Act; the installment of new measures according to the stipulations of the Pittman-Robertson Act.

 Incubation Studies of the Yellow-headed Blackbird. Illustrated by lantern slides. (20 minutes). REED W. FAUTIN, University of Illinois, Champaign, Illinois.

During the summer of 1937 observations were made on the nesting activities of two colonies of Yellow-headed Blackbirds. One hundred and twenty-seven nests were investigated. Data were kept on 83 nests from the time the first egg was laid until the young hatched. Information was obtained on the length of the incubation period; attentiveness and inattentiveness of incubating females at various times during the day and at various parts of the incubation period; behavior of females and males during incubation; causes of nesting failures.

27. Bird Distribution and Biomes in Western Canada. Illustrated by lantern slides. (20 minutes). Eugene P. Odum, Biological Research Division, Edmund Niles Huyck Preserve, Rensselaerville, New York.

Bird life of deciduous forest, northern coniferous forest, mountain coniferous forest, tundra, and grassland were compared from observations made during the 1939 summer field trip in animal ecology conducted by the Department of Zoology, University of Illinois, under the leadership of Dr. V. E. Shelford. The trip covered more than 6,000 miles, north as far as Churchill and west to the Canadian Rockies. The varying roles of cover (habitat) and climate in controlling distribution were discussed in the consideration of the life zone and biome theories as they apply to the area traversed. It is important to consider abundance and necessary to distinguish between (1) climax

and sub-climax, (2) primitive and disturbed conditions in evaluating observations and theories.

28. Studies of the Life History of the Pileated Woodpecker. Illustrated by lantern slides. (20 minutes). J. Southgate Y. Hoyt, Laboratory of Ornithology, Cornell University, Ithaca, New York.

A report on three years study of the life history of the Pileated Woodpecker. Data were represented on the winter and summer ranges of a pair of birds; the year-round activities, courtship, nesting, habits, development and growth of young and post-nesting activities of a pair observed in the vicinity of Ithaca, New York. Presented for the first time were daily observations made throughout the period the young were in the nest and also observations made on a young bird reared in captivity.

29. The Mockingbird's Imitation of Other Species. (15 minutes). George R. Mayfield, Vanderbilt University, Nashville, Tennessee.

A statistical study of imitations of other species by the Mockingbird. Included were many records by the same bird and songs from Mockingbirds in various parts of the United States. It was established that nearly one-eighth of the Mockingbird's imitations are songs of the Carolina Wren; one-twelfth of the Blue Jay; one-fourteenth of the Cardinal, etc. The question of inherited song was treated.

SATURDAY AFTERNOON

Michigan Bird Life. Illustrated by motion pictures in natural color. (20 minutes). PARKS ALLEN, Ithaca, Michigan.

A series of motion pictures in color of Kirtland's Warbler, Song Sparrow, Sandhill Crane, Yellow Warbler, Goldfinch and others.

31. Birds of Florida. A Natural Color Motion Picture Record of Birds Taken by the Charles F. Williams-Cincinnati Museum of Natural History Expedition. (20 minutes). Peter Koch, Terrace Park, Ohio.

A motion picture record of a month's bird-photographing expedition in Florida. Members of the expedition included Karl H. Maslowski, Woodrow Goodpaster, and the speaker.

32. Some Birds of Eastern Kentucky. Illustrated by motion pictures in natural color. (20 minutes). WILFRED A. WELTER, State Teachers College, Morehead, Kentucky.

A series of portraits of birds in the mountainous section of Kentucky. Among the birds shown were Bewick's Wren, Hooded and Blue-winged Warblers, Yellow-breasted Chat, Meadowlark, and Acadian Flycatcher.

33. Adventures in Color with American Birds. Illustrated by motion pictures in natural color (30 minutes). CLEVELAND P. GRANT, Baker-Hunt Foundation, Covington, Kentucky.

Outstanding motion pictures of Snow Geese in migration, courtship of the Ruffed Grouse and Prairie Chicken, and the nesting of a pair of Baltimore Orioles.

34. Ruby-throated Hummingbird and Wild Turkey. Illustrated by motion pictures in natural color. (20 minutes). OLIN SEWALL PETTINGILL, JR., Carleton College, Northfield, Minnesota.

Picture studies of several hummingbirds obtaining food from artificial feeding devices at the Laurence J. Webster estate in Holderness, New Hampshire, and the nesting of a pair of hummingbirds near the University of Michigan Biological Station at Douglas Lake, Michigan. Also picture studies of wild Turkeys making periodical visits to feeding stations on Herbert L. Stoddard's Sherwood plantation in Georgia.

35. The 1939 Semple Expedition to Eastern Mexico. Illustrated with several paintings by the speaker. (30 minutes). George Miksch Sutton, Laboratory

of Ornithology, Cornell University, Ithaca, New York.

In March, April, and May, 1939, John Bonner Semple and George Miksch Sutton returned to Mexico, accompanied by Thomas D. Burleigh of the U. S. Bureau of Biological Survey. They visited seven states. In April they were joined by Frederick S. Loetscher, graduate student of Dr. Sutton's at Cornell. They made a survey at exactly the point visited by Frank M. Chapman in 1897. Their principal objective was the rediscovery of Otus pinosus.

36. Western Arctic Birds in Color. Illustrated by motion pictures in natural color. (20 minutes). Charles E. Gillham, U. S. Bureau of Biological Survey, Edwardsville, Illinois.

Motion pictures of birds taken on a trip sponsored by the Bureau of Biological Survey to northwestern Canada and the delta of the Mackenzie River. Excellent shots were obtained of Hudsonian Curlews, Northern Phalaropes, and various arctic breeding waterfowl.

THE BIRD PHOTOGRAPH EXHIBIT

An excellent Bird Photograph Exhibit was arranged in the South Room on the mezzanine floor of the Brown Hotel. This exhibit displayed camera work by members of the Wilson Ornithological Club and clearly showed the interest taken in photography by the organization. Each exhibitor was limited to three black and white photographs not less than 8" x 10" in size and three natural color photographs not less than 4" x 5" in size. A mimeographed list of the exhibitors was provided and the pictures were attractively placed on large, upright wall-boards.

One hundred and forty bird photographs were shown, the subject matter ranging from pictures of nests and young to enormous colonies of water-birds. Especially fine were numerous photographs of birds in flight, three natural color pictures of birds, and several black and white transparencies against artificial

Photographs were exhibited by the following members:

Cyril E. Abbott Bernard W. Baker Floyd S. Carpenter Victor Coles David Damon Edward Fox Dana J. C. Dickinson, Jr. Adrian C. Fox Albert F. Ganier Charles E. Gillham Woodrow Goodpaster A. Haak Harry W. Hann D. Ralph Hostetter J. Southgate Y. Hoyt Allen Kain Peter Koch

Karl H. Maslowski Amos I. Means Henry Mousley Olaus J. Murie Ralph S. Palmer Miles D. Pirnie Olin Sewall Pettingill, Ir. Henry J. Rust Evelyn J. Schneider Thomas G. Scott Mabel Slack J. Murray Speirs Henry O. Todd, Jr. Ivan R. Tomkins Jack Van Coevering Lawrence H. Walkinshaw Edward H. Wollerman

The Bird Photograph Exhibit was officially opened on Friday evening by a reception given to the members of the Wilson Ornithological Club by the Kentucky Ornithological Society and the C. W. Beckham Bird Club. Entertainment was "in good old Southern style!" Members not only had opportunity to study the Exhibit but to make the acquaintance of many Kentucky ornithologists.

THE ANNUAL DINNER

The Annual Dinner of the Wilson Ornithological Club, attended by 137 members and visitors, was held in the Crystal Ballroom of the Brown Hotel on Saturday evening. This dinner will be remembered as a notable occasion in the history of the Wilson Ornithological Club, for on this occasion the Club first attained a membership of one thousand. Vice-President Hicks, long an ardent campaigner in behalf of Club membership, announced that enrollment in the organization stood at 992, that the 1000 mark was tantalizingly near, and that this dinner would be an appropriate occasion on which to reach it. He thereupon asked for pledges and the responses were immediate.

The speaker at the dinner was Mr. Karl H. Maslowski of Cincinnati, Ohio, who showed his beautiful natural color motion picture film entitled: "Nature's Children." Remarkable were his close-up shots depicting the eating habits of a praying mantis, and likewise his camera studies of red foxes and chipmunks.

EXCURSIONS

On Sunday four motor trips were made to points of interest in Kentucky, the transportation being provided for all members. At least twenty-five members availed themselves of this opportunity.

ATTENDANCE

Registration showed the presence of 168 persons. Of these 100 were members, 12 were Councillors, 4 were Past-Presidents. Dr. Lynds Jones was the only Founder present. Those members who came great distances to attend the meeting were Harrison F. Lewis of Ottawa, Canada, W. E. Saunders of London, Ontario, Richard L. Weaver of Hanover, New Hampshire, Wendell P. Smith of Wells River, Vermont, Miss Hedvig Swanson of Macon, Georgia, and Miss Fannye A. Cook of Jackson, Mississippi.

Altogether 15 states, the District of Columbia, and the Dominion of Canada were represented in Louisville. Naturally the state where an Annual Meeting is held provides the largest attendance. So this year Kentucky had the largest number present: 18 members and 34 visitors.

This is the first time that Kentucky has taken the lead in attendance at an Annual Meeting although it was second only to Indiana at the Indianapolis meeting in 1937. Next to Kentucky the state with the largest attendance was Michigan with 16 members and 6 visitors.

The list of members in attendance follows:

From Georgia: 1-Miss Hedvig Swanson, Macon. Visitor, 1.

From Illinois: 14—Mrs. M. M. Nice, C. O. Decker, L. B. Nice, Miss J. C. Duer, Chicago; R. W. Fautin, Mrs. D. H. Speirs, J. M. Speirs, Urbana; K. E. Bartel, Blue Island; S. C. Kendeigh, Champaign; L. G. Flentge, Des Plaines; C. E. Gillham, Edwardsville; C. A. Beckhart, Barrington; C. W. G. Eifrig, River Forest; Miss Maxine Smith, Rockford. *Visitors*, 3.

From Indiana: 5—S. E. Perkins, III, Miss M. F. Campbell, Miss C. A. Moore,

Miss Dorothy Hover, Miss M. R. Knox, Indianapolis. Visitors, 5.

From Kentucky: 18—J. B. Young, Miss Emilie Yunker, W. M. Clay, H. B. Lovell, B. L. Monroe, F. S. Carpenter, L. C. Brecher, James LaFollette, Miss

¹ This figure places the Louisville meeting fifth largest attendance, being exceeded in total registration by the 1939 Ann Arbor meeting (261), the 1937 Indianapolis meeting (238), the 1929 Des Moines meeting (202) and the 1934 Pittsburgh meeting (178). However, had registration been taken during the last session of the Louisville meeting when 400 persons were estimated as present, the meeting would have undoubtedly equalled, if not exceeded, the Ann Arbor meeting of last year.

Mabel Slack, Miss E. J. Schneider, Louisville; J. F. Spears, V. K. Dodge, Miss C. C. Counce, Lexington; C. P. Grant, Covington; Mrs. J. H. Mayer, Cynthiana; W. A. Welter, Morehead; Miss Edith Pearson, Miss Hazel Kinslow, Paducah. Visitors, 34.

From Michigan: 16-Mrs. George Burch, L. H. Walkinshaw, M. D. Pirnie, G. N. Rysgaard, Peter Ward, E. M. Brigham, Jr., Battle Creek; Miss M. E. Gross, Grand Rapids; Miss Katherine Merry, R. E. Olsen, Pontiac; J. Van Tyne, H. W. Hann, J. L. George, Mrs. R. L. Kahn, Ann Arbor; Mrs. G. A. Kelley, Detroit; Parks Allen, Ithaca; B. W. Baker, Marne. Visitors, 6.

From Minnesota: 4-O. S. Pettingill, Jr., Northfield; Gustav Swanson, St. Paul; Mrs. C. E. Peterson, Madison; Mrs. E. O. Wilson, Montevideo. Visitors, 2.

From Mississippi: 1-Miss F. A. Cook, Jackson.

From New Hampshire: 1-R. L. Weaver, Hanover.

From New York: 9-Miss Theodora Nelson, Peter Edge, Mrs. C. N. Edge, New York City; H. L. Kutz, J. C. Howell, L. I. Grinnell, G. M. Sutton, J. D. Webster, Ithaca; E. P. Odum, Rensselaerville. Visitors, 4.

From Ohio: 11-Mrs. C. H. Warner, L. E. Hicks, Columbus; Lynds Jones, Oberlin; Peter Koch, Victor Coles, Allan Kane, K. H. Maslowski, Gordon Acomb, Cincinnati; Miss Vera Carrothers, Miss M. E. Morse, Miss Isabella Hellwig, Cleveland. Visitors, 6.

From Pennsylvania: 3-R. W. Glenn, G. B. Thorp, Miss M. L. McConnell, Pittsburgh. Visitors, 4.

From Tennessee: 8-Mrs. A. R. Laskey, J. B. Calhoun, H. C. Monk, A. F. Ganier, G. R. Mayfield, Nashville; W. M. Walker, Jr., Henry Meyer, Knoxville; Arthur Stupka, Gatlinburg.

From Vermont: 1-W. P. Smith.

From Virginia: 2-D. R. Hostetter, Harrisonburg; J. S. Y. Hoyt, Lexington. From West Virginia: 3-I. B. Boggs, Maurice Brooks, Morgantown; W. A. Lunk, Fairmont.

From Washington, D.C.: 1-W. C. Henderson.

From Dominion of Canada: 2-H. F. Lewis, Ottawa, Ontario; W. E. Saunders, London, Ontario.

Summary of Attendance: Total registration, 168 (Members, 100; Visitors, 68); Total from Louisville, 39 (Members, 10; Visitors, 29); Total from Kentucky, 52 (Members, 18; Visitors, 34). Total outside of Kentucky, 116 (Members, 82; Visitors, 34). Maximum number at each program session: Friday morning, 55; Friday afternoon, 80; Saturday morning, 95; Saturday afternoon, 400. Number at Annual Dinner, 137. Number of persons in group photograph, 111.

REPORT OF THE INDEX COMMITTEE

As it was deemed advisable not to recommence work on the index until further investigation had been conducted on apparently important improvements in indexing policies, progress the past year consisted mainly of these researches, and also in very fruitful conferences with Messrs. Strong, Kalmbach, and Van Tyne, in some correspondence on policy, and in the formulation of a policy sheet for the use of indexers. The studies having been completed, actual indexing is now going forward. Miss Phoebe Knappen has undertaken to finish the author-title indexing, and the chairman is now engaged in personally preparing a complete index, with all cross references, to a recent volume. This will serve as a final test of the adequacy of our system.

The Club owes a debt of gratitude to Mrs. Nice, to Dr. Strong, who retired last November as chairman of the committee, and to Dr. Van Tyne, who served in the same capacity in the interim. Their guidance and encouragement in furthering this undertaking have been invaluable.

Respectfully submitted,

THOMAS D. HINSHAW, Chairman

REPORT OF THE MEMBERSHIP COMMITTEE

In accordance with Dr. Olin Sewall Pettingill, Jr.'s, 1938 secretarial report to the Wilson Ornithological Club, the suggestions regarding membership solicitation were placed in effect.

In late February, 1939, letters were sent by Mrs. Margaret M. Nice, President, and your Membership Chairman to prospective State Chairmen. The response to these letters was good and the following State Chairmen were appointed:

California—John T. Emlen, Jr.
Colorado—Gordon Alexander
Georgia—H. C. Jones
Illinois—Frank Bellrose, Jr.
Indiana—Fred Thomas Hall
Kentucky—Robert M. Mengel
Michigan—Lawrence H. Walkinshaw
Minnesota—Kenneth D. Morrison
Mississippi—Miss Fannye A. Cook
Missouri—William Jenner
New England—Richard L. Weaver
New Jersey—Alfred E. Eynon
New Mexico—Lawrence V. Compton
New York—Mrs. Olive R. York

North Dakota—Miss Perna M. Stine
Ohio—Karl H. Maslowski
Oklahoma—Miss Edith R. Force
South Dakota—Philip A. DuMont
Tennessee—Albert F. Ganier
Texas—J. E. Stillwell
Utah—W. H. Behle
Virginia—J. Southgate Y. Hoyt
Washington—Vernon L. Marsh
West Virginia—Maurice Brooks
Wisconsin—G. A. Ammann
Wyoming—Otto McCreary
British Columbia—Walter S. Maguire

The first drive for members got under way in April and ended in June. The second drive began in September and has lasted until the present day.

Much of the work, naturally, has been on an experimental basis. Letters were sent in three forms:

(1) Printed letters (not mimeographed) to persons from large lists, presumably interested in birds in general.

(2) Printed letters to individual groups such as bird-banders, wildlife refuge workers and game managers. Each of this series pertained to the particular work of each group and was not general.

(3) Personally written letters to individuals where the occasion warranted.

It can be seen readily that to write personal letters to persons taken from lists would entail considerable expense both in regard to postage and to secretarial help. It is the opinion of your Membership Committee that the new folder describing the Wilson Club and its objectives, designed by Dr. Pettingill, is by far the greatest drawing power to prospective members since it tells the entire story practically without the aid of an additional letter. Every letter sent out contained one of these folders. Many select lists of prospective members have been used during the past year.

Approximately 3,500 persons have been circularized. One hundred and ninety-four members have been obtained.

It is significant that many persons receiving the folders and an invitation to join the Club sent in their applications at a much later date. The last application received by your committee just a few days ago was from the very first series of names circularized last April.

The actual cost of solicitation by the Membership Committee has been confined entirely to the cost of supplies and to postage. No additional secretarial help has been used to date.

Whatever success has been attained has been due chiefly to the careful plans made by your officers, to the new folder, and to the splendid cooperation of the State Chairmen and individual members who sent in names of prospective members.

Respectfully submitted,

BURT L. MONROE, Chairman

REPORT OF THE SECRETARY FOR 1939 1

In the Annual Letter I stated that I would have a happy announcement to make concerning the membership status of the Wilson Ornithological Club. Indeed, I now have! This year we lost only 93 members as against 127 members last year: 61 were delinquent in dues; 26 resigned; 6 were taken by death. Thirteen former members rejoined the Club and we have obtained 253 new members giving us a total of 1044 members. Thus we have made a net gain in membership over last year of 173 members.

Our membership, while most heavily distributed in the midwestern states, is rapidly becoming country-wide. Ohio and Michigan are tied for first place in greatest number of members, with Illinois following a close second. But it is gratifying to note the decided increase in numbers of members in New England, Pennsylvania, New York, and Texas.

The total distribution of members by states, provinces, and foreign countries is given below. The figures in parentheses indicate the number of members new to the organization in 1939.

UNITED STATES			Oklahoma	15	(5)
Arizona	8	(3)	Oregon	5	
Arkansas	5	(1)	Pennsylvania	51	(14)
California	49	(8)	Rhode Island	2	(2)
North Carolina	6	(3)	Tennessee	19	(4)
South Carolina	5	(2)	Texas	29	(11)
Colorado	11	(4)	Utah	8	(2)
Connecticut	8	(3)	Vermont	1	(-)
North Dakota	12	(5)	Virginia	14	(1)
South Dakota	6	(0)	West Virginia	13	(3)
Delaware	2		Washington	7	(2)
Florida	10	(3)	Washington, D.C.	30	(2)
Georgia	13	(3)	Wisconsin	29	(6)
Idaho	3	(0)	Wyoming	7	(2)
Illinois	86	(20)	CANADA		(-)
Indiana	31	(6)	Alberta	1	(1)
Iowa	38	(4)	British Columbia	3	(-/
Kansas	4	(2)	Manitoba	5	(2)
Kentucky	25	(11)	Nova Scotia	1	(-)
Louisiana	8	(2)	Ontario	21	(4)
Maine	6	(1)	Quebec	3	(' /
Maryland	13	(3)	Saskatchewan	1	
Massachusetts	28	(5)	FOREIGN COUNTRIES		
Michigan	96	(23)	Alaska	2	(2)
Minnesota	41	(17)	China	1	(1)
Mississippi	6	(2)	Cuba	1	` ′
Missouri	25	(7)	Finland	1	
Montana	5	(3)	Great Britain	2	(2)
Nebraska	14	(2)	Holland	1	ν-,
New Hampshire	5	(2)	New Zealand	1	
New Jersey	17	(5)	Northern Rhodesia	1	(1)
New Mexico	8	(3)	Peru	1	` '
New York	75	(18)	Switzerland	1	(1)
Ohio	96	(14)	Venezuela	1	,
		ν/	Virgin Islands	1	
			0		

The 253 new members are classified as follows: Sustaining, 5; Active, 30; Associate, 218. The total membership is classified as follows: Honorary, 5; Life, 7; Sustaining, 39; Active, 234; Associate, 748.

¹ Revised through December 31, 1939.

Our record gain in new members that brings us for the first time in the Club's history up to and beyond the one-thousand mark has been due partly to the continued efforts of the Secretary with the cooperation of his fellow officers, but chiefly to the persistent work of the Chairman of our new Membership Committee. During this meeting the chairman of that committee will speak to you and will, I hope, describe his unique committee and methods of procedure. I cannot say whether he will give you any indication of the amount of correspondence that has been involved, the great time and energy that the work has required, and the great personal burden that it has been to him. But whatever his remarks may be, we have sufficient imagination to realize how greatly we are indebted to him.

This year our membership solicitation work has been greatly facilitated by the publication of an attractive membership solicitation folder. Several copies are available for examination purposes at the Registration Desk. I should advise each one of you to study this folder. You may learn much about the Wilson Ornithological Club that you do not yet know. While this folder has been issued by the Club at considerable initial expense, it is in a way a permanent acquisition. Its entire form is being kept in a Northfield, Minnesota, printing house and addi-

tional copies may be run off from it when needed.

Possibly it may interest you to know that each person elected to membership is formally notified by the Secretary. At the same time he is asked to fill out a copy of the questionnaire similar to the one submitted to the entire membership in 1937. Thus we in charge of the Club continue to keep ourselves informed of our membership and to know who our members are.

The Local Committee is to be congratulated on the fine Bird Photograph Exhibit. I hope that members in attendance will appreciate the great personal expenditure of time and money that this Exhibit has meant to the Local Committee. Please repay the Committee by studying this Exhibit carefully during your spare moments.

As Chairman of the Program Committee, may I solicit criticisms and suggestions pertaining to the present program, its arrangement, scope, and general content. While it is now too late to make radical changes, nevertheless such expressions of opinion will guide us in making up the program in years to come.

Respectfully submitted,

OLIN SEWALL PETTINGILL, JR., Secretary

November 24, 1939

REPORT OF THE WILDLIFE CONSERVATION COMMITTEE

Just a year ago we presented the first annual report of this Committee. Events of the past year indicate that the wildlife conservation activities suggested then were fairly appropriate and possible of accomplishment.

The September issue of The Wilson Bulletin presented more than a page of wildlife conservation notes with an announcement from the Editor that summaries of information gathered will be printed regularly together with the recommendations of the Committee. Members are invited to contribute data and opinions.

Plans for a conservation symposium for this meeting failed, but your Committee recommends an expression of views and suggests a symposium for the next meeting of this Club.

During the past year the committee members have exchanged views on legislative and educational programs and have begun plans for an inventory of conservation activities in all states. In developing our conservation program it is not only necessary but also is very desirable to have more members actively participating in local programs and in helping the Committee learn of the needs and progress in wildlife affairs throughout the country.

The Committee urged the Department of the Interior to continue all possible protection for waterfowl and received a reassuring letter from Chief Gabrielson. Needs for increased protection are now being studied by the Biological Survey and your Committee.

Among suggestions received from committee members and on which I wish your reactions are the following:

That a list of Conservation workers be prepared for each state, indicating which are Wilson Club members. (Each list might in part be compiled from the Secretary's questionnaire of 1937.)

It is urged that we "go slow" in arriving at conclusions and in making recommendations, but there is no need for going slow in promoting natural history inventories which are the only sound basis of wildlife conservation. We especially need data on rare species and on those which are vulnerable because of colonial nesting or extreme pressure from hunters.

In addition to participation in various parts of our program we urge members who can give financial aid to do so. Studies such as the three-year study of the California Condor are deserving of help. Contributions can also be used to good

advantage in promoting interest in wildlife conservation.

Again let us remind you that the success of the Wilson Club Conservation Committee section of the *Bulletin* depends not only on the Editor and your Committee but depends also on each of you and your contributions of conservation news. To be of lasting benefit, either to the birds or to the people who are to enjoy them, a sound conservation program must develop slowly but steadily. We rely on you.

Respectfully submitted,

MILES D. PIRNIE, Chairman

November 25, 1939

WILSON ORNITHOLOGICAL CLUB LIBRARY

Recent gifts are as follows:
Ralph Beebe—5 pamphlets, 5 periodicals.
Paul Errington—6 pamphlets.
W. C. Legg—current numbers of "Field Ornithology."
Marius Morse—2 pamphlets.
National Park Service—1 book.
Margaret M. Nice—1 book, 3 pamphlets, 54 periodicals.
Schenectady Bird Club—Nos. 1 to 7 of "Feathers."
O. A. Stevens—1 pamphlet.
Dayton Stoner—1 pamphlet.
Texas Game, Fish and Oyster Commission—4 pamphlets.
U. S. Bureau of Biological Survey—2 books.
L. H. Walkinshaw—5 pamphlets, 2 periodicals.
Wisconsin Conservation Department—7 pamphlets.

November 24, 1939

	REPORT OF THE ENDOWMENT FUND COMMITTEE
To	tal Endowment Fund shown by report dated Nov. 22, 1938:
	Bonds in safety deposit box of Fletcher Trust Co\$2,261.25
	Balance cash in savings account, Fletcher Trust Co., Indianapolis 109.03
Re	Grand total, Nov. 22, 1938
IXC	Interest coupons on U.S. Postal Savings 2½% coupon bonds due
	Jan. 1, 1939 and July 1, 1939 and deposited in savings account,
	St. Anthony Park State Bank\$ 19.50
	Interest on savings account in St. Anthony Park State Bank
	\$ 20.32
To	tal Endowment Fund, Nov. 24, 1939:
	Bonds in safety deposit box at St. Anthony Park State Bank (value
	at maturity, \$2,530.00)\$2,261.25
	Balance cash in savings account, St. Anthony Park State Bank 129.35
	Grand total\$2,390.60
	Grand total

Respectfully submitted,

GUSTAV SWANSON, Chairman

REPORT OF THE LIBRARIAN FOR THE YEAR ENDING NOVEMBER, 1939

I have the honor to present herewith the ninth annual report of the Librarian of the Wilson Ornithological Club.

As a result of last year's cataloguing of the collection, little work was necessary in administering the library this year. Books were arranged on the shelves so they could be used to the best advantage, and the additions to the library were accessioned as they were received.

The most noticeable addition to the library was the increased number of exchanges. We are now getting regularly 46 publications.

Many valuable gifts continue to come to the library. Large boxes were received from Wendell Taber and Winsor M. Tyler of Cambridge, Massachusetts, Lynds Jones of Oberlin, Ohio, Mrs. Margaret M. Nice of Chicago and W. J. Willis of Long Island, New York. Others who have given pamphlets, reprints and books to the library are A. C. Fox of Fargo, North Dakota, Burt Gresham of Winnipeg, Manitoba, Ralph Beebe of Ecorse, Michigan, Paul A. Stewart of Leetonia, Ohio, Lawrence H. Walkinshaw of Battle Creek, Michigan, Robinson C. Watters of Cambridge, Maryland, Leon Kelso of Washington, D.C., Paul Lechevalier of Paris, France, Leonard Wing of Pullman, Washington, E. L. Sumner, Jr., of Menlo Park, California, Maurice Brooks of Morgantown, West Virginia, Mrs. F. C. Laskey of Nashville Tennessee, Miles D. Pirnie of Battle Creek, Michigan, Francis Harper of Swarthmore, Pennsylvania, Dayton Stoner, Albany, N. Y., Josselyn Van Tyne of Ann Arbor, Michigan, G. J. Wallace of Lenox, Massachusetts, and W. L. McAtee of Washington, D.C.

Among the gifts were runs of many magazines such as The Oölogist. Bluebird, British Birds, Osprey, Guide to Nature, American Ornithology, Victorian Naturalists, Le Naturaliste Canadien, The Migrant and the Oölogist's Record. The total number of pieces added to the library exclusive of the periodicals is 872.

The stock of the Wilson Bulletins have been arranged for easy accessibility and efficient use.

Respectfully submitted,

F. RIDLEN HARRELL, Librarian

REPORT OF THE TREASURER FOR 1939

RECEIPTS FOR 1939

Balance as shown by last report, Nov. 22, 1938\$ 187.64
Dues:
Associate
Active 537.75
Sustaining
Subscriptions
Sale of back numbers of The Wilson Bulletin
Contributions of authors toward publication
Gifts 45.00
Miscellaneous receipts
Total\$2,454,88

DISBURSEMENTS FOR 1939

President's expense (postage)	3.84
Annual meeting expense (1938, 1939 in part)	161.72
Membership, Ecological Soc. and Illinois Cons. Council	4.00
Book plates	2.65
Secretary's and membership committee expense (postage, supplies,	
printing, clerical aid)	382.07
Editor's expense, Bulletin, postage, supplies	1,586.03
Treasurer's expense, postage, printing, etc.	64.12
Subscription refunds	9.90
Shipping back numbers of Bulletin from Sioux City to Ann Arbor	93.69
Checks returned	10.50
Bank charges-Check collection fees, bookkeeping charge, de-	
duction on foreign exchange	36.56
Reprints (for which authors paid W.O.C.)	21.88
Total	
Delence on hand in St. Anthony State Penk, New 22, 1020	\$ 77.02

GUSTAV SWANSON, Treasurer

November 24, 1939. Approved by Auditing Committee Wendell P. Smith Eugene P. Odum

THE WILSON BULLETIN PUBLICATION DATES

The actual dates of publication of the four numbers in 1939 were: March 31, June 22, September 28, and December 23.